

525, 495

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 March 2004 (04.03.2004)

PCT

(10) International Publication Number
WO 2004/018435 A1

(51) International Patent Classification⁷: **C07D 239/56**,
239/60, 417/12, 403/12, 401/04, 401/12, 413/14, 413/12,
413/04, A61K 31/513, A61P 37/08, 37/06, 19/02, 9/10,
19/10

Road, Loughborough, Leicestershire LE11 5RH (GB).
STEELE, John [GB/GB]; AstraZeneca R & D Charn-
wood, Bakewell Road, Loughborough, Leicestershire
LE11 5RH (GB). **CHEEMA, Lal, Lashkar, Singh**
[GB/GB]; AstraZeneca R & D Charnwood, Bakewell
Road, Loughborough, Leicestershire LE11 5RH (GB).

(21) International Application Number:
PCT/GB2003/003632

(74) Agent: **ASTRAZENECA**; Global Intellectual Property,
Mereside, Alderley Park, Macclesfield, Cheshire SK10
4TG (GB).

(22) International Filing Date: 20 August 2003 (20.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0219819.0 24 August 2002 (24.08.2002) GB
0223287.4 8 October 2002 (08.10.2002) GB

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except MG, US*): **AS-
TRAZENECA AB** [SE/SE]; Sodertalje, S-151 85 (SE).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for MG only*): **ASTRAZENECA UK LIM-
ITED** [GB/GB]; 15 Stanhope Gate, London, Greater Lon-
don W1K 1LN (GB).

(72) Inventors; and

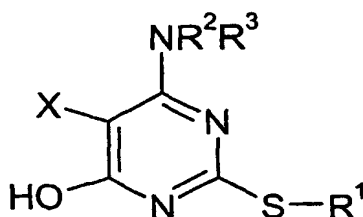
(75) Inventors/Applicants (*for US only*): **EBDEN, Mark,
Richard** [GB/GB]; AstraZeneca R & D Charnwood,
Bakewell Road, Loughborough, Leicestershire LE11
5RH (GB). **MEGHANI, Premji** [GB/GB]; AstraZeneca
R & D Charnwood, Bakewell Road, Loughborough,
Leicestershire LE11 5RH (GB). **COOK, Antony, Ronald**
[GB/GB]; AstraZeneca R & D Charnwood, Bakewell

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: PYRIMIDINE DERIVATIVES AS MODULATORS OF CHEMOKINE RECEPTOR ACTIVITY



(1)

(57) Abstract: Compounds of formula (1), pharmaceutically acceptable salts, solvates and *in vivo* hydrolysable esters thereof, have activity as pharmaceuticals, in particular as modulators of chemokine receptor (especially CXCR2) activity, and may be in the treatment (therapeutic or prophylactic) of conditions/diseases in human and non-human animals which are exacerbated or caused by excessive or unregulated production of chemokines.

WO 2004/018435 A1